

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 4, 6 and 11-13 are pending in the application. Claims 1 and 4 are amended; Claims 2-3, 5 and 7-10 are canceled; and Claims 11-13 are newly added by the present amendment. Support for the new and amended claims can be found in the original specification, claims and drawings.¹ No new matter is presented.

In the outstanding Official Action, Claims 1-3 were rejected under 35 U.S.C. § 102(b) as anticipated by Bashan et al. (U.S. Patent No. 6,045,043, herein "Bashan"); Claims 1-7 were rejected under 35 U.S.C. § 102(b) as anticipated by Kreft (U.S. Patent No. 5,206,495); Claims 1, 8 and 10 were rejected under 35 U.S.C. § 102(e) as anticipated by Nelson et al. (U.S. Patent No. 6,377,218, hereinafter "Nelson"); and Claim 9 was rejected under 35 U.S.C. § 103(a) as unpatentable over Nelson in view of Kreft.

Regarding the rejection based on Bashan, Applicants respectfully submit that amended independent Claim 1 and new independent Claim 11 recite novel features clearly not taught nor rendered obvious by the applied reference.

Amended independent Claim 1 recites an IC chip, comprising:

- a CPU;
- an exposed contact interface connected to the CPU configured to enable data communications with outside; and
- a contactless interface connected to the CPU configured to enable data communications with the outside; wherein the IC chip is configured to be inserted into a card having an antenna, and the IC chip is configured to be connected to the antenna to function as a contactless IC card and also to function as a contact IC card using the exposed contact interface.

¹ e.g., specification, Figs. 4 and 6 and p. 5, lines 5-20 and p. 6, lines 14-33 of the specification.

As depicted in an exemplary embodiment at Fig. 3 and p. 5, lines 5-20 of the specification, the contactless interface (38) is provided to be connected to the antenna (46) of the card, while the contact interface (36) remains exposed so as to be available to function as a contact IC card.

New independent Claim 11 is amended to recite substantially similar features, but instead of reciting that the IC chip is configured to be inserted into a card, new independent Claim 11 recites that the IC chip is configured to be inserted into the mobile terminal, as depicted at Fig. 6 and described at p. 6, lines 14-33 of the specification. Accordingly, as amended independent Claim 1 and new independent Claim 11 recite substantially similar features, the arguments below are applicable to each of independent Claims 1 and 11.

Turning to the applied reference, Bashan describes a data transaction device having contact and contactless modes of operation, which comprises a semiconductor device for operating in contact and contactless modes in accordance with the respective contact or contactless data communications protocol.² As depicted in Fig. 2, the device of Bashan includes a contact field (11) an antenna interface (16) in a microprocessor (14).

Bashan, however, fails to teach or suggest that his device is an ***“IC chip configured to be inserted into a card having an antenna, and the IC chip is configured to be connected to the antenna to function as a contactless IC card and also to function as a contact IC card using the exposed contact interface,”*** as recited in amended independent Claim 1.

At col. 4, lines 11-23, Bashan describes that in order to properly select the required mode of operation, a microprocessor (14) is programmed to recognize an initial state “power on” corresponding to the presence or absence of an electromagnetic field induced in the coil (15).” This provides an indication as to whether data is to be transmitted in contactless mode, in which case the microprocessor (14) ignores any data on the line (13) transmitted thereto in

² Bashan, Abstract.

“contact” mode. Thus, Bashan specifically describes that if any electromagnetic field is detected in the antenna, data transmitted on the line (13) in what might be a “contact” mode is ignored. Accordingly, the device of Bashan may be configured to be connected to an antenna, but does not function as a contact card using the exposed contact interface in this configuration.

Therefore, Bashan fails to teach or suggest an IC chip configured to be inserted into a card having an antenna, and “*the IC chip is configured to be connected to an antenna to function as a contactless IC card and also to function as a contact IC card using the exposed contact interface,*” as recited in amended independent Claim 1. Instead, as noted above, the device of Bashan is not capable of operating in a contact mode when an electromagnetic field is detected in the antenna coil (15).

Further, amended independent Claim 1 recites that “the IC chip is configured *to be inserted into a card having an antenna*”. However, as described at col. 3, lines 53-55 of Bashan, his device is a data transaction card (10) and is not an IC chip configured to be inserted into a card.

Accordingly, Applicants respectfully request that the rejection of Claim 1 (and the claims that depend therefrom) under 35 U.S.C. § 102(b) be withdrawn. For substantially similar reasons, it is also submitted that new independent Claim 11 (and Claims 12 and 13 which depend therefrom) patentably define over Bashan.

In the outstanding Official Action, Claims 1-7 were rejected under 35 U.S.C. § 102(b) as anticipated by Kreft. In response to this rejection, Applicants respectfully submit that amended independent Claim 1 and new independent Claim 11 recite novel features clearly not taught nor rendered obvious by the applied references.

Kreft describes a chip card capable of selectively transmitting data via contacts or transmission coils.³ As depicted in Fig. 1, and as described at col. 2, lines 64 through col. 3, line 10, the device of Kreft is a chip card (1) that includes a semiconductor device (2) and a contact field (3). Kreft's device also includes two coils (4, 5) which are coupled to the semiconductor device (2) and which are configured for bi-directional transmission of data and transmission of energy.

Kreft, however, fails to teach or suggest that his device is a “IC chip configured *to be inserted into a card having an antenna*,” or that his device is a “IC chip configured to be connected *to the antenna to function as a contactless IC card and also to function as a contact IC card using the exposed contact interface*,” as recited in amended independent Claim 1.

As depicted in Fig. 1, for example, Kreft's device is a card (1) which includes embedded therein a chip (2) a contact field (3) in a plurality of transmission coils (4). Thus, Kreft's device is a unitary integrated device and is not an “IC chip configured to be inserted into a card having an antenna.” Instead, Kreft's device is a card (1) that includes the antenna coils (4, 5) therein and is not a chip configured to be inserted into a card having an antenna, as recited in amended independent Claim 1.

Further, amended independent Claim 1 recites that “the IC chip is configured to be connected to the antenna to function as a contactless IC card and also to function as a contact IC card using the exposed contact interface.” As noted at p. 3 of the Official Action, Kreft operates in a manner similar to Bashan in this regard. Specifically, Kreft at col. 2, lines 13-17 describes that a switching element, as depicted in Fig. 2, for example, is operative to sense voltages provided via the contact field and/or the coils so as to effect selective data transmission between either the contact field or the coils and the semiconductor device on

³ Kreft, Abstract.

that basis. Thus, Kreft describes that his device uses the switch to select either the contact field or the coils to conduct data transmission, but fails to teach or suggest that both the contact field and the coils may be used together. Therefore, Kreft fails to teach or suggest that his device “is configured to be connected to the antenna *to function as a contactless IC card and also to function as a contact IC card using the exposed contact interface*,” as recited in independent Claim 1.

Accordingly, Applicants respectfully request that the rejection of Claim 1 (and the claims that depend therefrom) under 35 U.S.C. § 102(b) be withdrawn. For substantially similar reasons, it is also submitted that independent Claim 11 (and the claims that depend therefrom) patentably define over Kreft.

Further, the outstanding Official Action rejected Claims 1, 8 and 10 under 35 U.S.C. § 102(e) as anticipated by Nelson. Applicants respectfully submit that amended independent Claim 1 and new independent Claim 11 recite novel features that clearly are not taught or rendered obvious by the applied references.

Nelson describes a peripheral component providing multiple types of interfaces. In one embodiment, the peripheral component comprises a housing with logical circuitry within. Specifically, Fig. 2 of Nelson describes a peripheral component as an RF device (200) which includes an RF module (210), a link controller (220), a microcontroller (230), and an external interface (240).⁴ Thus, Nelson’s device is an integrated unitary card-type device used for RF connectivity in a laptop or similar device.

However, Nelson fails to teach or suggest an IC chip including a CPU, a contact interface, and a contactless interface which is “*configured to be inserted into a card having an antenna*,” as recited in amended independent Claim 1.

⁴ Nelson col. 4, lines 34-44.

Instead, as depicted in Fig. 3, for example, and as described at col. 2, lines 24-38, the antenna device is integrated into the housing, and when extracted, the antenna is operable to return substantially to a predetermined shape to allow for transmission. Thus, the device of Nelson, including the antenna, is enclosed within a single housing. Therefore, Nelson fails to teach or suggest an IC chip including a contact interface, a contactless interface and a CPU which is “*configured to be inserted into a card having an antenna*,” as recited in amended independent Claim 1.

Further, with respect to new Claim 11, which recites that “the IC chip is configured to be inserted into a mobile terminal device *having an antenna*,” as noted above, Nelson describes that the device itself includes an antenna. Thus, the device of Nelson is not configured to be inserted into a device having an antenna, since Nelson’s device already includes an antenna.

Accordingly, Applicants respectfully request that the rejection of Claim 1 (and the claims that depend therefrom) under 35 U.S.C. § 102(e) be withdrawn. For substantially similar reasons, it is also submitted that new independent Claim 11 (and the claims that depend therefrom) patentably define over Nelson.

Finally, Claim 9 was rejected under 35 U.S.C. § 103(a) as unpatentable over Nelson in view of Kreft. This rejection, however, is rendered moot with the cancellation of Claim 9.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1, 4, 6 and 11-13 is patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

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